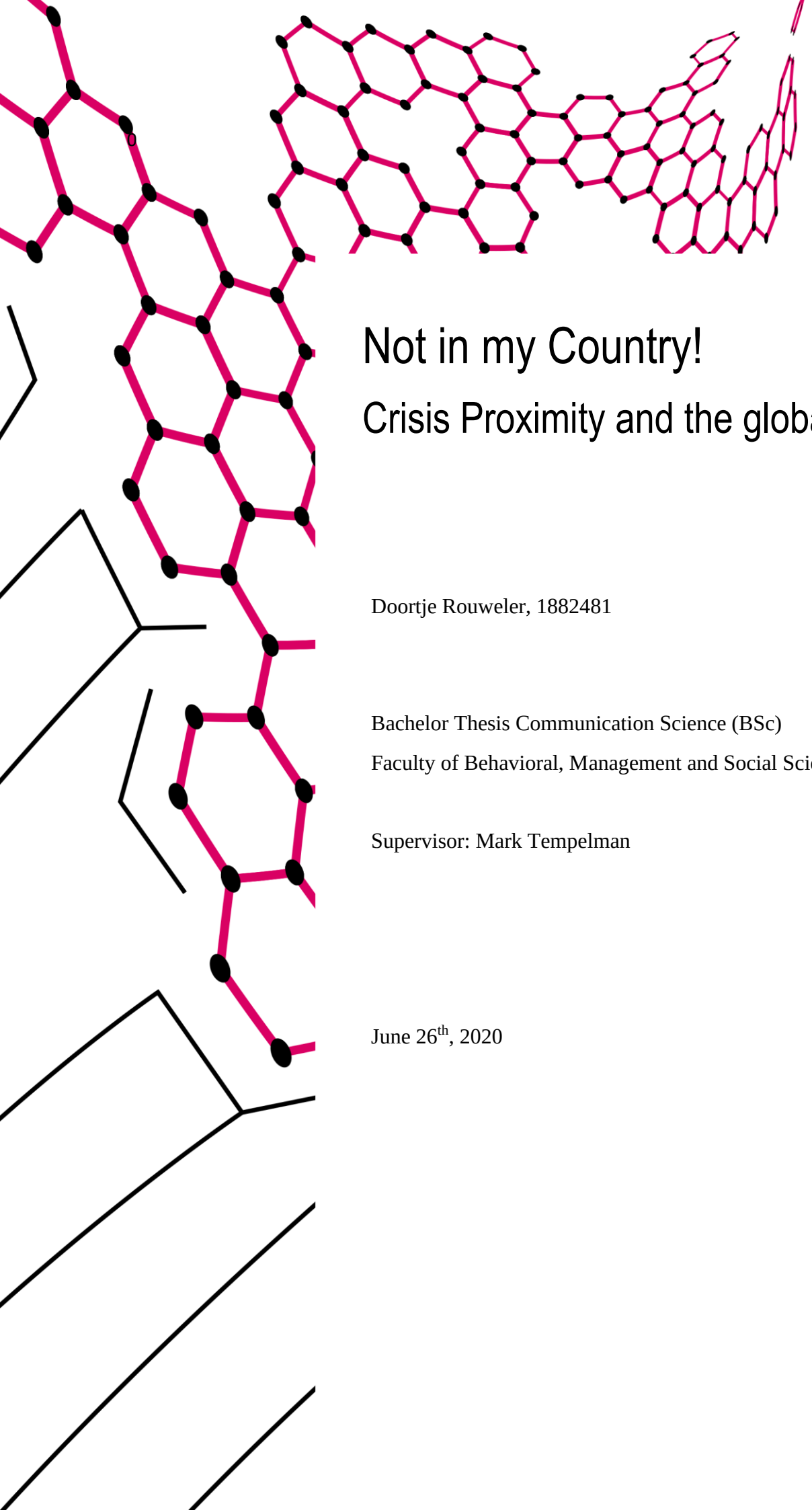

Not in my Country!

Crisis Proximity and the global Pandemic

Doortje Rouweler, 1882481

Bachelor Thesis Communication Science (BSc)

Faculty of Behavioral, Management and Social Sciences

Supervisor: Mark Tempelman

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Abstract

Aim: With CoVid-19, a virus found its way from Asia to the Netherlands. This study investigates if the changing proximity of the virus to Dutch citizens changes their response to the information, they receive by official social media sites on the basis of the Situational Crisis Communication Theory.

Method: A content analysis on 200 comments from the Dutch RIVM Facebook site. They were taken from three different postings, based on the proximity of the virus and ranging from January 24th until February 27th. These were analysed based on their content with a focus on emotions and intentional responses.

Findings: There is a clear increase with changing proximity levels. Especially negative emotions, criticism, and information are common responses. While there is a technical overlap, the content within the comments does not truly connect and looks like two comments in one.

Conclusions: In general, crisis proximity does influence the public's response to increase. For communication professionals, it is necessary to consider the effect of other, external factors to Situational Crisis Communication Theory.

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1. Introduction

It is not every day that the world witnesses' a major health crisis, although there have been many over the past years. Back in 2015/2016, there was the Zika virus. From 1976 up until today, people have been infected with the Ebola virus, which has been the cause of 11.300 deaths in the past two years alone. Another big outbreak was the SARS virus, or by its lesser known full term "Severe Acute Respiratory Syndrome". One of the biggest ones in human history was the Black Death, with deaths estimated to be around 75 to 200 million. Now, the pandemic of 2020 "only" has around 480.000 deaths in comparison, but the Black Death took place over several years, the current virus has only been discovered in December, six months ago when the virus linked to the family of coronaviruses was first discovered.

The global pandemic started in Wuhan, China. The World Health Organization (WHO) received reports of cases of pneumonia of unknown cause on the 31st of December 2019 ("Events as they happen", 2020). Two weeks later, the first case outside of China was announced. Until February 11th, it was unclear what exactly the cause was. WHO announced that the lung problems stem from a new coronavirus disease: CoVid-19. The disease spread quickly and at the end of March – three months after its discovery – there were more than 750.000 infected with CoVid-19 and 36.405 that have passed away in connection to the virus (World Health Organization, 2020).

While this pandemic was not expected, governments as well as health agencies have planned for other pandemics. Researchers have concluded that public communication is an important aspect if an outbreak happens. Holmes, Henrich, Hancock, and Lestou (2009) concluded that a part of good communication is an effective use of media. The most information is received by mass media and many of their participants agreed that it is the "predominant way to reach the public during a health crisis" (p. 794). For the Netherlands, the main information is published by the *Rijksinstituut voor Volksgezondheid en Miliieu* (RIVM). They give daily updates on the infection and mortality rates and are the main information and advise source for the ministry of health.

Current measures everywhere include strict lockdowns. They started partially throughout regions that were hit hard, such as Hubei (China) and the Lombardy (Italy) (Paul, 2020, Reuters Editorial, 2020). By now, more than a third of the world countries have imposed

lockdowns, forcing citizens to stay and work from home, non-essential shops to close, and schools and universities to teach online (Kaplan, Frias, & McFall-Johnsen, 2020). In the Netherlands, a so-called "smart lockdown" was imposed. It is relatively easy to compare lockdown measures with the help of Google. The Dutch news site rtlnieuws has done exactly that and noticed that in comparison, the Dutch still have quite a bit of freedom (Bunskoek, 2020). While the 1.5 meters distance is one of the rules, there are others that have not been implemented in the Netherlands. One example is the obligatory wearing of nose and mouth coverit ng masks, that have become the standard in German stores. In general, it can be said that the "smart lockdown" does not force people to stay at home, but potential risk-increasing places like bars and offices are closed and big events have been cancelled (Leunissen, n.d.).

Not only the measures are a point where comparisons can be drawn. Infection numbers differ for each country, some higher, some lower, and can be an indication of the effectiveness of the measures. When comparing the Netherlands to its direct neighbour Germany, a clear difference can be seen: Only 0.002% of the German population have been infected (Robert Koch Institute), whereas the Dutch have a percentage of 2.6% (RIVM). The question arises whether the differences solely arise from the different measures, or if there are other factors are involved.

Looking at the behaviour of the Dutch people, a connection can be drawn there. When spring arrived and brought the sun, even though a global pandemic was happening, the citizens went out into the streets ("Het wordt drukker op straat: hoe houdbaar is de intelligente lockdown?", 2020). Do they not take the threat serious? Was the information spread effectively? One thing that makes people react differently is that one only pays attention to the most important information (Riddell, 2020). This is based on previous experiences and thus an entirely normal way of reacting. However, the question remains whether there might be outside factors that interfere with the experiences and attitudes that one develops at the start of the pandemic.

The most interesting factor here might be the proximity. When the first reports came in, CoVid-19 was still contained to China. Over a short period of time, it found its way through all parts of the world. Looking at the different responses with varying degrees of proximity can give interesting insight into changes of attitude. This can be connected to the perceived risk of the virus (Gupta et al, 2020). With changing proximity, the virus can become riskier for individuals. For this, especially the response to the RIVM is of interest. During this pandemic, early research has shown that the internet is the primary information source (Wang et al., 2020,

p. 1729). As primary information source, the response they receive will be the most direct one to crisis communication regarding CoVid-19. Regarding that, the research question this report will answer is the following:

> ***How does crisis proximity affect the public's response to the crisis communication of the RIVM regarding CoVid-19?***

To answer this question, a closer look will be given to the Facebook posts by the RIVM that come closest to the following moments: (a) the first reports of the virus, (b) the first case in Europe, and (c) the first case in the Netherlands. Each Facebook post has likes and comments that can be analysed for their sentiment and used to explore to the general attitude. This focus fills a gap in existing literature about crisis proximity. It brings in the effect of an independent variable, that previous crisis communication theories have not considered. As an example, the Situational Crisis Communication Theory by Coombs (2007) only considers the different types of crisis and the types of communication strategies. Furthermore, there is research on involvement of companies and governments, but none about the people that the communication is aimed at.

Since this research is based on existing theory, the following theoretical framework will have a detailed explanation on the Situational Crisis Communication Theory by Coombs and its current application on the RIVM and CoVid-19. It also delves into emotions, which is the main factor for public response and the basis for analysing the comments. With not only communication-focused, but also psychological backgrounds, common emotions and sentiments can be identified and thus classified. Thereafter follows the method section, which will include a detailed description of the content and the corpus, the coding process and codebook, as well as the process of analysis. The results section will show the outcomes of the analysis and highlights important insights, moving from category to category and after that to different relations. The next section will be the discussion and examine the highlights of the results, the implications for existing and future research, as well as limitations and potential pitfalls of this research.

2. Theoretical Framework

2.1. Crisis Communication

Before understanding the effects of crisis communication, it is important to have a clear definition of crisis communication itself. Coombs and Holladay (2010) defined it as "the collection, processing, and dissemination of information required to address a crisis situation" (p. 20). Crisis communication has several theories on how to best respond. The most commonly know is the Situational Crisis Communication Theory by Coombs himself. It is one of the few that puts another focus onto the stakeholders, and not only to the organization itself (Coombs, 1995). Since the Situational Crisis Communication Theory focuses on the audience as well, it will serve as the basis for analysing the crisis communication of the RIVM.

2.1.1. Situational Crisis Communication Theory

The situational crisis communication theory was first established by Coombs in 2004. The main goal was to use communication to protect the reputation of an organization (Coombs, 2004) and has its roots in attribution theory (Coombs, 2007). Attribution theory states certain events illicit specific core emotions, such as negative events and anger (Coombs, 2017). The connection between events and emotions create the basis for the situational crisis communication theory. To understand the public's response and thus the effectiveness of the strategy, it is important to have a clear understanding of the situational crisis communication theory.

Situational Crisis Communication examines the occurring crisis and its potential threats for an organization's reputation (Coombs, 2004, Coombs, 2007). Coombs identified three factors that influence the severity of the threat: (1) initial crisis responsibility, (2) crisis history, and (3) prior relational reputation. Initial crisis responsibility focuses on "how much stakeholders believe organizational actions caused the crisis" (Coombs, 2007, pp.) For example, if it is a natural disaster, where all preventive measures had been taken, initial crisis responsibility is lower compared to an accident caused by the organization. Crisis history is quite self-explanatory: whether there have been similar crises in an organization's history. Prior relational reputation is based on stakeholders' perception before the crisis happens (Coombs, 2007). Based on this, Coombs has listed different types of crises in different clusters: Victim, accidental, and preventable. Each cluster has a different level of severity. Table 1.1 shows each crisis per cluster.

Depending on the crisis, Coombs suggests different strategies with the goal to "repair reputation, reduce negative affect[s], and prevent negative behavioural intention" (Coombs, 2007, pp.). The strategies are divided into primary and secondary strategies. Primary strategies are clustered into deny, diminish, and rebuild crisis response strategies. For the strategies to be effective, threats and strategies need a conceptual connection. Table 1.2 shows the different strategies.

Table 1.1 - crisis types by crisis clusters (Coombs, 2007, p. 168)

Victim cluster: In these crisis types, the organization is also a victim of the crisis.
(Weak attributions of crisis responsibility = Mild reputational threat)
Natural disaster: Acts of nature damage an organization such as an earthquake.
Rumor: False and damaging information about an organization is being circulated.
Workplace violence: Current or former employee attacks current employees onsite.
Product tampering/Malevolence: External agent causes damage to an organization.
Accidental cluster: In these crisis types, the organizational actions leading to the crisis were unintentional.
(Minimal attributions of crisis responsibility = Moderate reputational threat)
Challenges: Stakeholders claim an organization is operating in an inappropriate manner.
Technical-error accidents: A technology or equipment failure causes an industrial accident.
Technical-error product harm: A technology or equipment failure causes a product to be recalled.
Preventable cluster: In these crisis types, the organization knowingly placed people at risk, took inappropriate actions or violated a law/regulation.
(Strong attributions of crisis responsibility = Severe reputational threat)
Human-error accidents: Human error causes an industrial accident.
Human-error product harm: Human error causes a product to be recalled.
Organizational misdeed with no injuries: Stakeholders are deceived without injury.
Organizational misdeed management misconduct: Laws or regulations are violated by management.
Organizational misdeed with injuries: Stakeholders are placed at risk by management and injuries occur.

Table 1.2 - crisis response strategies (Coombs, 2007, p. 170)

Primary crisis response strategies
Deny crisis response strategies
Attack the accuser: Crisis manager confronts the person or group claiming something is wrong with the organization.
Denial: Crisis manager asserts that there is no crisis.
Scapegoat: Crisis manager blames some person or group outside of the organization for the crisis.
Diminish crisis response strategies
Excuse: Crisis manager minimizes organizational responsibility by denying intent to do harm and/or claiming inability to control the events that triggered the crisis.
Justification: Crisis manager minimizes the perceived damage caused by the crisis.
Rebuild crisis response strategies
Compensation: Crisis manager offers money or other gifts to victims.
Apology: Crisis manager indicates the organization takes full responsibility for the crisis and asks stakeholders for forgiveness.
Secondary crisis response strategies
Bolstering crisis response strategies
Reminder: Tell stakeholders about the past good works of the organization.
Ingratiation: Crisis manager praises stakeholders and/or reminds them of past good works by the organization.
Victimage: Crisis managers remind stakeholders that the organization is a victim of the crisis too.

In practice, when applying SCCT, Coombs presents a two-step process to evaluate the threat: firstly, detect the initial crisis responsibility with help of the crisis cluster in table 1.1, followed by determining crisis history and prior relationship reputation. These results will lead to the best fitting strategy.

In his several refinements, Coombs has not adapted his theory to include social media or any other external factors. External factors can potentially be connected to the threat but are not considered when preparing a strategy. This can cause further reputational damage, highlighting the importance of including external factors. Other researchers have taken it upon themselves, to further investigate the potential use of social media. Graham, Avery, and Park (2015) have concluded that especially YouTube, Facebook, and Twitter are effective as communication means. They also saw that in the different types of crisis, the biggest effect was during a public health crisis. This is because this case demands the most immediate information. The importance of proper information has been shown by Wang et al. (2020). They focused particularly on the CoVid-19 pandemic and found out that the more satisfied people are with the information, the better their psychological health.

Other researchers also confirmed that there are only a few studies that cover social media in crisis communication (Roshan, Warren, & Carr, 2016, Ki & Nekmat, 2014). Interestingly, Roshan, Warren, & Carr (2016) noted differences between what was suggested by previous literature and the actual behaviour of organizations, and "thus not benefitting from the full potential value of social media for supporting organisational crisis communication" (p. 359). On platforms such as Facebook, the most common strategies are *justification*, *apology*, *excuse*, or *denial* (Ki & Nekmat, 2014). For this research, the strategy of the RIVM will be considered on three different occasions, based on the cluster by Coombs (2007) and their own posts on Facebook.

2.2. Public Response

To evaluate a strategy, and ensure its effectiveness, the public's response is an important tool for measurement. However, there are a multitude of factors relating to the response, such as beliefs, opinions, attitudes, and perceptions (Smith, Brouwer, Jeffrey, & Frijns, 2018). Trinh, Nguyen, Vo, & Do (2016) state that Facebook comments are a "rich source[s] of information to mine for opinions and analyse user behaviour" (p.264). They use sentiment analysis and classify sentences in emotional and non-emotional. Most researchers agree that emotions are the main way to analyse the content of comments. Atkeson & Alverez (2018) have specifically

investigated the use of sentiment analysis in social media responses and whether it is an effective method. Using social media has some benefits compared to surveys. When observing and gathering based on comments or tweets, there is a lower risk for prompting or framing by the observing researcher.

The use of Facebook as main social media is based on its many possibilities. Users can like, comment, or share posts. The psychology behind the need to like and comment has several meanings. Liking a post can go from a simple acknowledgement to support to empathy (Seiter, 2019). It is similar for commenting. When commenting, the first drive is that the user has something to say. For many, it can be more satisfying than likes. It is a way to share their opinions as well as offering the possibility to receive an answer (Seiter, 2019).

2.2.1. Emotions

Emotions can be divided into negative and positive emotions. As stated by Coombs (2007), negative emotions have a negative effect on an organization's reputation. Therefore, having an overview of human emotions and the possible effect they have is important. The emotions that humans feel have been classified by many researchers. In 2001, Parrott proposed a two-layer model with primary and secondary emotions. Cohn and Fredrickson classified these emotions as positive, with the following definitions (2009). The most basic understanding of emotions however comes from Ekman (1999). He proposed six basic emotions: Anger, disgust, fear, happiness, sadness, and surprise. Savolainen (2015) used a different approach and besides the emotional aspects of content, the intentions also play an important role.

Based on this, the emotional and behavioural basis for the content analysis will be focused on table 2.

Table 2

Emotions and Intentional Responses

Positive Emotions	Description
Gratitude	Feeling of thankfulness and appreciation (Savolainen, 2015)
Hope	Expectation of a positive outcome (Savolainen, 2015)
Joy	When hopes are realized and success achieved (Savolainen, 2015)
Relief	When expected failure does not arise (Savolainen, 2015)
Sympathy	Caring about and being sad about someone else's troubles, grief, misfortune (Savolainen, 2015)

Negative Emotions	Description
Contempt	Regarding someone or something as inferior or worthless (Savolainen, 2015)
Fear	Distressing feeling (Savolainen, 2015)
Irritation	Being stimulated by an event or idea of uncomfortable kind (Savolainen, 2015)
Sadness	Feeling of disadvantage, loss, despair, sorrow (Savolainen, 2015
Disgust	Rejection or revulsion to something potentially contagious, offensive, distasteful, unpleasant (Badour, 2018)
Intentional Responses	**Description**
Sarcasm	A sharp, bitter expression or remark, intent of ridiculing or putting down someone (Savolainen, 2015)
Provocation	Aimed at causing dissent and usually only weakly connected to topic (Savolainen, 2015)
Off-topic	Unrelated to the topic, but without malicious intent (Savolainen, 2015)

2.3. Crisis Proximity

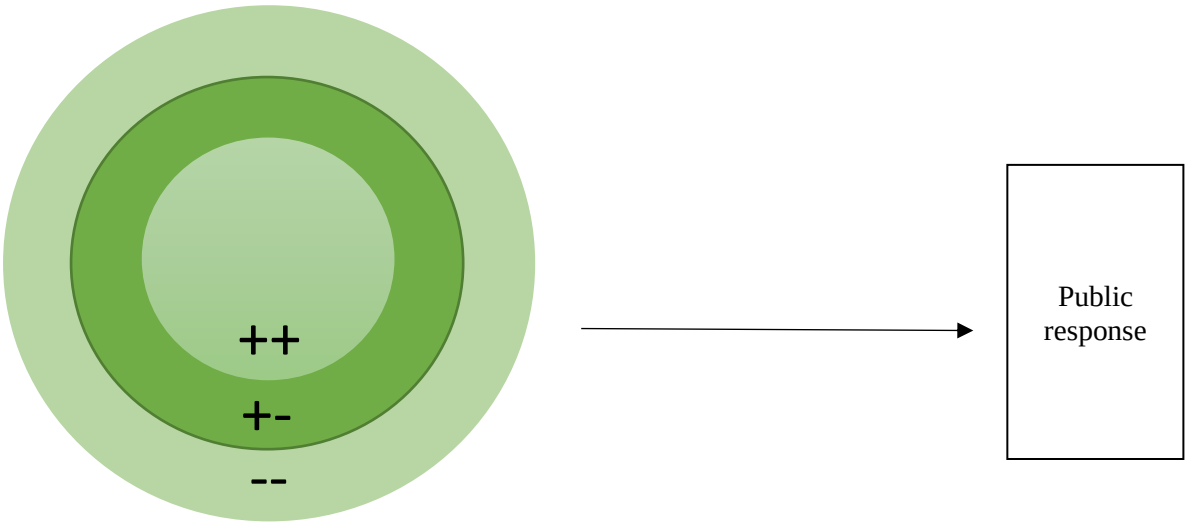
There are different types of proximity that have been investigated. One is geographical proximity. It relates to the physical distance, meaning that at low proximity, the crisis is far away (Boschma, 2005). In the case of the 9/11 disaster, geographical proximity had effects on the psychological trauma witnesses suffered. High proximity, the citizens of New York, had significantly more traumatic fallouts than those with a low proximity, away from New York (Schlenger, 2002). Another effect of different geographical proximity is the way an event is seen (Fujita, Henderson, Eng, Trope, & Liberman, 2006). When something is further away, it is easier to see it on a global scale.

Another type of proximity is psychological/ emotional proximity. Proximity can be strongly associated with distress (Thoresen, Flood Aakvaag, Wentzel-Larsen, Dyb, & Kristian Hjemdal, 2012). In comparison with geographical proximity, psychological proximity has been more strongly associated with PTSD in the case of the Oslo terrorist attacks. Similarly, in the Boston bombings, emotional proximity changed the behaviour of seeking and sharing information (Huang, Starbird, Orand, Stanek, & Pedersen, 2015) For the case of the CoVid-19

disease, geographical proximity is like to have a larger impact than psychological proximity, since the geographical proximity gradually changes over time. Another reason why investigating proximity is important is because of the links to psychology. As can be seen by previous examples stated, crisis proximity can have a lasting psychological effect. Especially during a health crisis, psychological health is of importance and should be kept in mind, showing that crisis proximity can have long lasting effects.

2.4. Research Model

This model shows what is expected and will be researched. With a changing level of proximity (ranging from low to high) the public response is expected to change.



Level of proximity:

++ High

+- Medium

- - Low

3. Methods

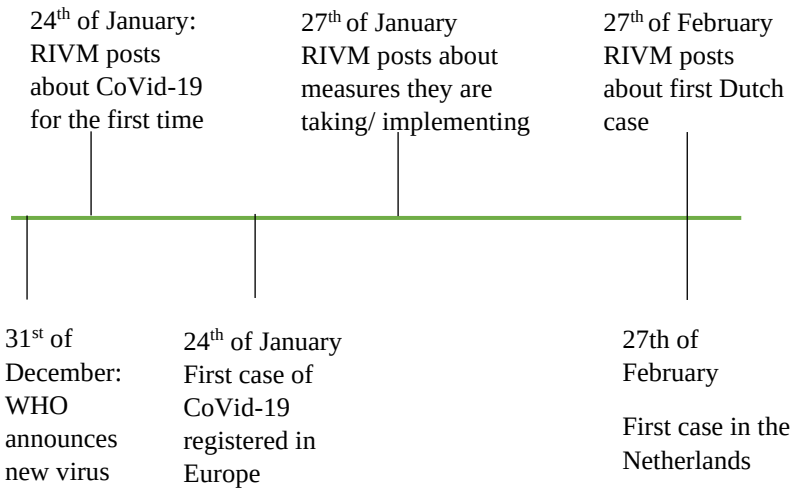
3.1. Design and Instrument

The basis for this research is a qualitative approach. Specifically, a comparative content analysis of Facebook comments throughout different points in time, corresponding with reports of the CoVid-19 virus at different levels of proximity to the Netherlands. Using a comparative content analysis offers the possibility to look further into changes within the content and is a common practice in social research. Facebook comments do not have a clear, manifest meaning to them but rely on the latent content which gives a deeper insight into emotions and intentions. This makes it necessary to do a content analysis, since latent content needs to be interpreted to find the meaning (Sprague & IEEE Computer Society, 2001, pp. 1–3).

The Facebook posts taken are from three different points: the announcement of the virus, the first case in Europe, and the first one in the Netherlands. To give a clearer overview when this exactly happened in relation to the events the posts are connected to, the following timeline has been created. A screenshot of each post can be found in Appendix B.

Figure 1

Timeline of the Facebook posts and the spread of CoVid-19



These posts were chosen based on them being the earliest and closest ones to the actual spread of CoVid-19. The first post will stand for a low level of proximity, the second for a medium level, and the third one for a high level. Each of these posts has had a number of reactions, such as likes and comments, which are an indicator of general interaction from the

public with the RIVM. Table shows these numbers, with button response showing likes and hearts and such, and comments the number of comments on each post.

Table 3

Number of responses to the Facebook Posts

Proximity level	Button Response	Comments
Low	40	23
Medium	43	51
High	164	223

This way of data collection offers the advantage of a low risk for framing and/ or prompting. A deductive coding process was used to code the comments. The codebook is based off table 2 in the theoretical framework. During the coding process, it was noticed that there are some comments that don't fall under any category and new codes were added for those.

There are quantitative elements to the analysis. Facebook posts receive several likes and comments, which can be counted. While they do not give much information about the general sentiment, they are still collected and analysed as an indication of the attention of the public.

Ethical considerations did arise regarding consent and confidentiality. In usual types of research, participants are supposed to give their consent. The use of online content from social media has been a widely discussed issue in research ethics. Atkeson & Alvarez (2018) conclude that since the content is publicly posted under the knowledge that it is accessible to anyone, there is no need for consent. However, to stay remotely in line with ethical considerations, there is no information on the participant other than the content of the comment itself.

The main instrument used was Facebook itself. With an active Facebook account and access to the website of the RIVM, the comments are easily accessible and can be copy pasted to then be analysed in Atlas.ti.

3.2 Corpus

The corpus consists of the comments that were left under the posts of the RIVM. There were no initial inclusion or exclusion criteria used, since the comments were put directly under the corresponding post and can thus be expected to be connected to the post. It is important to note that some comments are responses to other comments to be understood fully. Initially, all

comments posted were supposed to be analysed. During collection, many comments only consisted of marking another person with no further content and were thus excluded. This left 16 out of 23 comments for low proximity, 38 from 51 for medium proximity, and 117 from 223 for high proximity, making it a total 171 comments. Appendix B shows the full corpus.

3.3 Analysis

To analyse the comments, the codebook was created based on table 2 in the theoretical framework. During the initial coding process, together with the second coder when testing inter-rater reliability, it was noticed that some content did not fit within these codes, and two additional codes were added under the variable *other responses.*

Table 4

Codebook

Variable	**Code**	**Description**
Positive Emotions	Gratitude	A feeling of thankfulness and appreciation
	Hope	Expectation of a positive outcome
	Joy	Hopes are realized, success achieved
	Relief	When expected failure does not arise
	Sympathy	Caring about/ being sad about someone else's troubles, grief, misfortune
Negative Emotions	Fear	Feeling of distress
	Irritation	Being stimulated by an event or idea of uncomfortable kind
	Sadness	A feeling of disadvantage, loss, despair, or sorrow
	Disgust	Rejection or revulsion to something potentially contagious, offensive, distasteful, or unpleasant
	Anger	
Intentional Responses	Sarcasm	A sharp or bitter expression/remark with the intent to ridicule or put down someone
	Provocation	Causing dissent and only weakly connected to the topic

Other responses	conspiring	Spreading conspiracy theories related to the topic
	Information seeking or spreading	Asking for information or giving an answer to questions
	Criticism	Criticizing the strategies of the RIVM

The inter-coder reliability was calculated with Cohen's Kappa. To do this, ten percent of the corpus was coded independently by two coders according to the codebook. The ten percent were taken proportionately from different levels of proximity. This means that two were taken from low proximity, five from medium, and eleven from high. The result is a score of 0.82, which exceed the minimum of 0.6 to be sufficient and can be seen as good. The full calculations can be found in Appendix. For the specific categories, Cohen's Kappa is as follows and is sufficient:

Table 5

Cohen's Kappa

Category	Cohen's Kappa
Positive Emotions	1.00
Negative Emotions	0.71
Intentional Responses	1.00
Other Responses	0.88

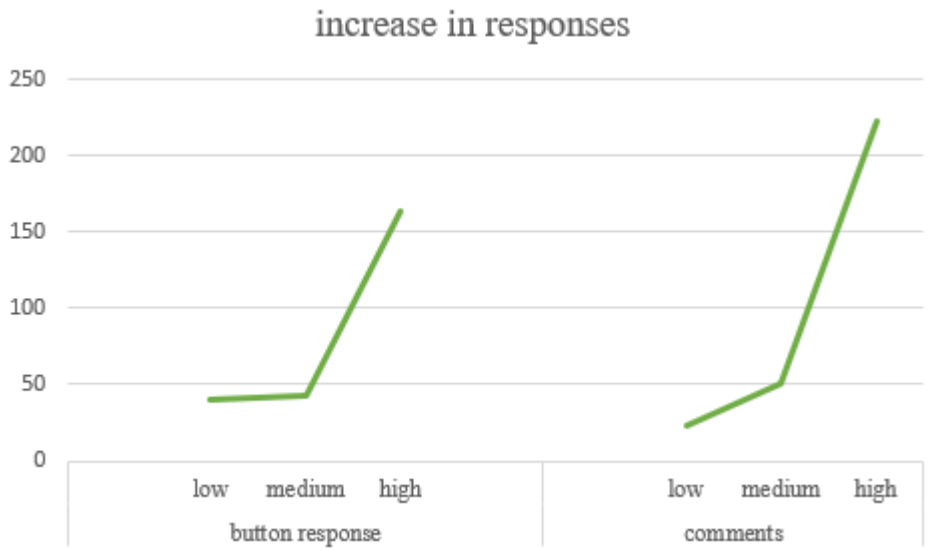
4. Results

4.1 Quantitative Results

In terms of numbers of likes and comments, there is a clear rise in interaction on the Facebook page of the RIVM. From low to medium proximity, the amount of likes only increased by 3. The comments on the other hand almost triple in numbers. From medium to high proximity, there is another increase. The button response quadrupled in comparison to medium proximity, the same goes for the comments. Overall, it can thus be said that in quantitative ways, interaction increased. The following figure will further display the vast differences for the different proximity levels.

Figure 2

Increase in responses for different proximity levels



4.2 Qualitative Results

4.2.1 Positive Emotions

Positive emotions have been found in only a small portion of the comments. The comments that correspond to low proximity have no notion of positive emotions. Medium proximity has two comments. The first one is showing sympathy towards sickly people that will be having long-term consequences because of CoVid-19. The other comment is about a user who shared a positive experience with the RIVM, for which they express gratitude and sympathy towards the RIVM. At high proximity, so with the first infection in the Netherlands, there has been only one commenter that expressed hope in finding a cure or vaccine soon. Overall, positive is by far the lowest expressed emotion with only three mentions in total.

4.2.2 Negative Emotions

In comparison to positive emotions, negative emotions has a lot more responses overall. Starting with responses to the low-proximity-posts, there have been three. They include fear, anger, and irritation. One of them is "screaming" for a travel-ban. The other two are mentioning that the RIVM does not seem to have all proper information about the virus and its spread. The difference is that one is irritated by it and the other shows fear.

For medium proximity, the responses have grown to twelve in total. The biggest recurring emotion here is fear with five comments. The most common situation people are scared about is people that are traveling or working at places like Schiphol. Others are scared because they belong to the high-risk population or are remembering previous viruses. After fear, another common emotion found in responses is anger. In all cases, it directed towards the RIVM and the information they give out. Users believe that the RIVM has not taken the risk seriously and should thus not be believed in. Besides anger and fear, irritation and disgust have also been found amongst the response. Commenters are disgusted by the potential deaths the virus may cause.

For high proximity, negative emotions in responses have increased to 18. Most frequently, fear and irritation can be found. The fear is spread amongst different topics. While one user is simply stating that they are scared, another is looking at people that went on vacation and got infected there. Another is wondering about masks, and yet another is wondering about how many are going to be treated in hospitals. When it comes to irritation,

there are again different reasons amongst commenters. The majority is irritated because of the RIVM, either because the RIVM did not give all information about where the infected is from, or because the RIVM previously stated that the virus is not “that dangerous”.

Some users have expressed their sadness, such as that only time will teach us, or because of the actions of single politicians. Other feelings that have been found are disgust and anger. One user has stated that he cannot hear about the corona virus anymore, and that it is not the only sickness that spreads and costs lives.

4.2.3 Intentional Responses

For low proximity, there is an almost equal division between sarcasm and provocation through the six comments. Sarcastic comments here include statements such as “no, that gives me trust” and “that’s what the Netherlands are good at”. Provocative responses are statements and questions such as “which is worse: the corona virus or the political lie virus? You may say” or the notion that there has already been a corona virus back in 2018.

Medium-level proximity has the same amount of comments with intentional responses as low proximity. Here, sarcasm is the most common one. One user comments that “95 registered deaths is incredibly high, this almost killed us”. Another one went “yes, and even this fast!”. Provocation is here centered around the idea of a vaccine. One user is sure that there will be a vaccine soon enough, even untested, and that this is only to scare people.

With a high level of proximity, there is an increase in the amount of comments to 26. In 21 of these comments, the main content were sarcastic mentions and sentences. One interaction between two users was that “luckily, the pizza is on the way” and that they would only order for the freezer. Others are focusing on the RIVM, stating that they did a “top performance” or that they have “everything under control”. On the other side of these responses are the provocative ones. One user is directing their comment to antivaxxers. Another one is mentioning influenza and how this would be the time to think about preventing that. A third user is also advocating towards the influenza and how corona is not the only virus that has a high infection rate.

4.2.4 Other Responses

Overall, the most common found responses were other responses, which are conspiracies, criticism, or information being spread or asked for. Low proximity had eleven comments that included other responses. Most common here was criticism. Criticism was directed toward two positions: politicians and the RIVM. The RIVM is criticised for wrong information on their

website (“the virus is not that contagious”) even though it has already spread very far. One is wondering about a conference in Amsterdam that attracts especially Asian people and how there has not been clear information on how this has been handled. Politicians are being said to only want to increase panic and fear. Another reaction to the post is the spread of information. Some users are linking back to previous coronaviruses and that they have been known for a few years.

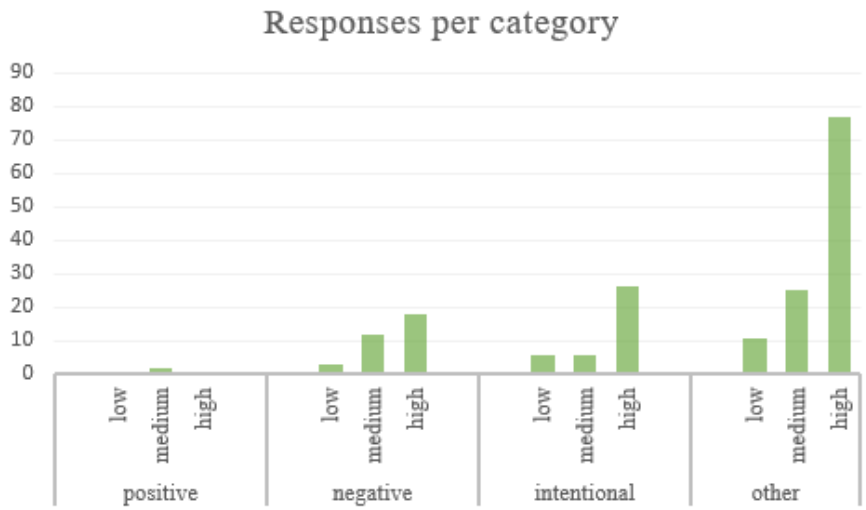
The amount of increased for medium proximity to 25. At this point, the majority of the comments are asking for or spreading information. Some users want to know how they or family members are going to be treated when they come back and what they need to know. Others are curious about previous viruses (Q-fever) and how the coronavirus differs from this. One user wants to know about vaccines and potential side effects. The second most common responses are criticism. At medium proximity, this is either general criticism which is directed at no one specifically or directed towards the RIVM.

The biggest increase takes place for the high-level-proximity post. The number of responses under the category of other responses is at 77. Just like medium proximity, the most common here is also the information seeking and spreading. Many want to know more details about the infected person, like where they are from and where they have been. Other users want to know more about the virus itself, like how it spreads and what the symptoms are, some wanting to know the difference between a CoVid-19 infection and an influenza infection.

Besides information, criticism has been found in many comments as well. Again, the RIVM was the main target of the criticism. As users see it, the RIVM has previously stated the virus as a “relatively small” threat but with the first infection here, it has not done enough.

Figure 3

Responses per category for different proximity levels



4.2.5 Associations between concepts

While the different concepts per category are changing with different proximity levels, it is not the only point of interest. Seeing where the different responses overlap give another insight. The biggest overlap is between criticism and information. These all happen at the high proximity level. In total, criticism has the highest overlap with other concepts. The following table shows the different overlaps and how much they occur. These are the most common overlaps with four or more.

Table 6
Overlaps between concepts

Criticism and…	Number of overlaps
…information	7
…provocation	6
…sarcasm	6
…anger	5
…conspiring	4
…fear	4
…irritation	4

As can be seen, the most common overlaps are with criticism, especially information, provocation, and sarcasm. Throughout the responses, the two concepts are not necessarily connected. One example from criticism and information: a user commented on the Q-fever and its consequences, and in the same comment criticised the RIVM that they underestimate pandemic. Another gives more information on the infected person, while criticising the amount of people that were celebrating and how another user thought it would be less. The provocative responses are spread across different themes, such as the role of politicians,

5 Discussion and Limitations

The aim of the study was to answer the question how the public's response changed together with crisis proximity. Before considering the exact sentiment of the public's response, it can be clearly said with CoVid-19 coming closer, there is a higher interest in the RIVM. Especially after the first case in the Netherlands was reported, based on the increase in interactions with the posts.

Compared to the other categories, positive emotions is very low. This can be related to studies in public management. The RIVM is a public organization and is viewed as such by people. Like other public organizations, such as the fire department or the police, the RIVM is held to higher standards than private organizations. When public organizations perform well, it is the standard they have been held to, unlike when they perform badly, for which they will receive a higher amount of negative responses.

Looking at the negative responses and the criticism the RIVM received, it becomes necessary to factor in other key factors into Situational Crisis Communication Theory. SCCT focuses solely on three: crisis responsibility, crisis history, and prior relational reputation (Coombs, 2007). Together with the type of crisis, this is supposed to maintain a positive reputation for the organization. However, RIVM received a lot of criticism and negative responses, which can pose a threat to reputation.

The overlaps between the concepts can at first glance seem like an indication of inherent connections between them. When looking into the content, many of those overlaps are not directly connected to each other but there are two comments

The ratio of the variables themselves stay quite similar, as the figures indicate. The thing that changes are the numbers and the content within the variables. Low proximity was mainly about criticism about the relatively low measures that had been taken. Some criticized the lack of travel restrictions; others thought the information the RIVM gave out was not enough.

With medium proximity, the amount of negative emotional responses and other responses increased. In comparison to low proximity, fear and anger are now taking over the comments. The fear is directed in different directions, but anger is mainly directed at the RIVM and the lack of measures they impose.

With high proximity, negative responses have gone down again and are more directed at specific situations than an entire strategy. Based on these changes, and in regard to the

research question, the hypothesis can be made that increasing proximity will first bring out the negative sides before it will balance out again. This is an important addition to literature and practice, since crisis proximity in one way or another, either globally or psychologically, will affect the response to crisis communication. By knowing how exactly its affect will be, professionals will have the opportunity to adapt early in a crisis and expect the surge of negative responses with increasing proximity.

Like every study and research, there have been limitations to this one as well. The perhaps biggest limitation is the sample size. With several million Dutch citizens, the few hundred that commented on Facebook might not be an accurate representation of the full population. Especially when of those almost 300 comments only a good hundred are left. However, this is the risk with any study and finding an adequate sample size for a population this big. Another risk with this sample not representing the population is the division of demographics.

6 Conclusion and Recommendations

The aim was to answer the research question: ***How does crisis proximity affect the public's response to the crisis communication of the RIVM regarding CoVid-19?*** Concluding on the research done it can be said that with nearing proximity, the public will tend towards an extreme before balancing out again. Based on this research, it can be expected that it will be more towards the negative side of emotions.

There are several recommendations that can be made for further research. One, based on this research, it would be interesting to study the comments that come after the end of the global pandemic. Because people are still dealing with the measures and are still limited, it might be of interest to see how the public views these measures once they are not restricting daily life anymore. Other researchers might focus on a different crisis. Especially non-health related ones could hold different responses in regard to perhaps fear. It would be a potential idea to investigate a crisis in which the organization is partly involved in the cause, and how crisis proximity affects responses in this case. For the future of SCCT research, more external factors need to be considered. For the workforce, in this case the RIVM, the implications are not to change the strategy completely. It would be more of use to adapt the strategy to actively react onto the criticism the RIVM receives.

Overall, changing crisis proximity increases the amount of public response that the RIVM receives, negative as well as positive.

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Appendix A – Literature Search Log

RQ: How does crisis proximity affect the public's response to the crisis communication of the RIVM regarding CoVid-19?

To search for literature, I decided on a few concepts I wanted to focus on. These were situational crisis communication theory, public response, and crisis proximity. As a data basis, I decided solely on google scholar. The following table will show a few examples of searches I have performed and the results they showed.

Table 7

Search terms and results

Search term	Goal	Results
Situational Crisis Communication Theory	Basic definition	188.000
Public response measurement	Finding a logical method	648.000

Example list of references found:

Coombs, W Timothy. (2007). Protecting Organization Reputations During a Crisis: The Development and Application of Situational Crisis Communication Theory. *Corporate Reputation Review*, *10*(3), 163–176. https://doi.org/10.1057/palgrave.crr.1550049

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Appendix B – Screenshots of posts

A - Low-level proximity

B - Medium-level proximity

C - High-level proximity

Appendix C – Corpus

Table 8

Low-level proximity

Nr	Title
1	1.01
2	1.02
3	1.03
4	1.04
5	1.05 – response to 1.04
6	1.06
7	1.07
8	1.08
9	1.09 – response to 1.08
10	1.10
11	1.11
12	1.12
13	1.13 – response 1 to 1.12
14	1.14 – response 2 to 1.12
15	1.15 – response 3 to 1.12
16	1.16 – response 4 to 1.12
17	1.17 – response 5 to 1.12
18	1.18 – response 6 to 1.12

Table 9

Medium-level proximity

Nr	Title
1	2.01
2	2.02 – response 1 to 2.01
3	2.03 – response 2 to 2.01
4	2.04
5	2.05
6	2.06
7	2.07 – response 1 to 2.06
8	2.08
9	2.09
10	2.10 – response 1 to 2.09
11	2.11 – response 2 to 2.09
12	2.12 – response 3 to 2.09
13	2.13 – response 4 to 2.09
14	2.14 – response 5 to 2.09
15	2.15 – response 6 to 2.09
16	2.16 – response 7 to 2.09
17	2.17 – response 8 to 2.09
18	2.18 – response 9 to 2.09
19	2.19 – response 10 to 2.09
20	2.20 – response 11 to 2.09
21	2.21 – response 12 to 2.09
22	2.22
23	2.23 – response 1 to 2.22

24	2.24 – response 2 to 2.22
25	2.25 – response 3 to 2.22
26	2.26 – response 4 to 2.22
27	2.27 – response 5 to 2.22
28	2.28
29	2.29 – response 1 to 2.28
30	2.30 – response 2 to 2.28
31	2.31
32	2.32
33	2.33 – response 1 to 2.32
34	2.34 – response 2 to 2.32
35	2.35 – response 3 to 2.32
36	2.36 – response 4 to 2.32
37	2.37 – response 5 to 2.32
38	2.38 – response 6 to 2.32
39	2.39 – response 7 to 32.32
40	2.40
41	2.41
42	2.42
43	2.43
44	2.44 – response 1 to 2.43
45	2.45 – response 2 to 2.43
46	2.46
47	2.47

Table 10

High-level proximity

Nr	Title
1	3.001
2	3.002
3	3.003 – response 1 to 3.002
4	3.004 – response 2 to 3.002
5	3.005 – response 3 to 3.002
6	3.006 – response 4 to 3.002
7	3.007 – response 5 to 3.002
8	3.008 – response 6 to 3.002
9	3.009 – response 7 to 3.002
10	3.010 – response 8 to 3.002
11	3.011
12	3.012
13	3.013 – response 1 to 3.012
14	3.014 – response 2 to 3.012
15	3.015 – response 3 to 3.012
16	3.016 – response 4 to 3.012
17	3.017
18	3.018
19	3.019
20	3.020 – response 1 to 3.012
21	3.021
22	3.022
23	3.023
24	3.024
25	3.025

26	3.026
27	3.027
28	3.028
29	3.029
30	3.030
31	3.031 – response 1 to 3.030
32	3.032
33	3.033
34	3.034 – response 1 to 3.033
35	3.035 – response 2 to 3.033
36	3.036 – response 3 to 3.033
37	3.037 – response 4 to 3.033
38	3.038 – response 5 to 3.033
39	3.039 – response 6 to 3.033
40	3.040
41	3.041
42	3.042 – response 1 to 3.041
43	3.043
44	3.044
45	3.045
46	3.046 – response 1 to 3.045
47	3.047 – response 2 to 3.045
48	3.048 – response 3 to 3.045
49	3.049 – response 4 to 3.045
50	3.050 – response 5 to 3.045
51	3.051 – response 6 to 3.045
52	3.052 – response 7 to 3.045
53	3.053 – response 8 to 3.045
54	3.054 – response 9 to 3.045
55	3.055 – response 10 to 3.045
56	3.056 – response 11 to 3.045
57	3.057 – response 12 to 3.045
58	3.058 – response 13 to 3.045
59	3.059 – response 14 to 3.045
60	3.060 – response 15 to 3.045
61	3.061 – response 16 to 3.045
62	3.062 – response 17 to 3.045
63	3.063 – response 18 to 3.045
64	3.064
65	3.065
66	3.066 – response 1 to 3.065
67	3.067 – response 2 to 3.065
68	3.068
69	3.069
70	3.070 – response 1 to 3.069
71	3.071
72	3.072 – response 1 to 3.071
73	3.073 – response 2 to 3.071
74	3.074 – response 3 to 3.071
75	3.075 – response 4 to 3.071
76	3.076 – response 5 to 3.071
77	3.077 – response 6 to 3.071
78	3.078 – response 7 to 3.071
79	3.079 – response 8 to 3.071
80	3.080 – response 9 to 3.071

81	3.081 – response 10 to 3.071
82	3.082 – response 11 to 3.071
83	3.083 – response 12 to 3.071
84	3.084 – response 13 to 3.071
85	3.085
86	3.086
87	3.087 – response 1 to 3.086
88	3.088
89	3.089
90	3.090 – response 1 to 3.089
91	3.091 – response 2 to 3.089
92	3.092 – response 3 to 3.089
93	3.093
94	3.094 – response 1 to 3.093
95	3.095 – response 2 to 3.093
96	3.096 – response 3 to 3.093
97	3.097
98	3.098
99	3.099
100	3.100
101	3.101 – response 1 to 3.100
102	3.102 – response 2 to 3.100
103	3.103 – response 3 to 3.100
104	3.104 – response 4 to 3.100
105	3.105
106	3.106 – response 1 to 3.105
107	3.107 – response 2 to 3.105
108	3.108 – response 3 to 3.105
109	3.109 – response 4 to 3.105
110	3.110 – response 5 to 3.105
111	3.111 – response 6 to 3.105
112	3.112
113	3.113 – response 1 to 3.112
114	3.114 – response 2 to 3.112
115	3.115

Appendix D – Cohen's Kappa

Table 11

Cohen's Kappa for Positive Emotions

Code	1.1	1.2	1.3	1.4	1.5
1.1	0	0	0	0	0
1.2	0	0	0	0	0
1.3	0	0	0	0	0
1.4	0	0	0	0	0
1.5	0	0	0	0	**1**

Table 12

Cohen's Kappa for Negative Emotions

Code	2.1	2.2	2.3	2.4	2.5	/
2.1	0	0	0	0	0	0
2.2	0	**2**	0	0	0	0
2.3	0	0	**1**	0	0	0
2.4	0	0	0	**1**	0	0
2.5	0	0	0	0	**1**	0
/	**1**	0	0	**1**	0	0

Table 13

Kohen's Kappa for Intentional Responses

Code	3.1	3.2	/
3.1	3	0	0
3.2	0	0	0
/	0	0	0

Table 14

Kohen's Kappa for Other Responses

Code	**4.1**	**4.2**	**4.3**	**/**
4.1	1	0	0	0
4.2	0	6	0	1
4.3	0	0	8	0
/		1	0	0